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Closer university/industry links forged in Europe
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NOVEMBER 6, 1989
CHEMICAL & ENGINEERING
NEWS

# European Community in 1992

## U.S. chemical companies weigh opportunities and challenges

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*Cover:* European Community headquarters in Brussels. Photo courtesy of EC Delegation, Washington, D.C.

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# LETTERS

## CHEMICAL SAFETY

### Disposing of explosive salts

SIR: Due to a recent article in *Science* by W. L. Faust [245, page 37 (1989)] indicating that cyanate and thiocyanate salts can be explosive, I warn as I did in C&EN (Feb. 16, 1985, page 2) that these compounds under certain disposal conditions cannot be considered low hazard anions as listed in the National Research Council book, "Prudent Practices for Disposal of Chemicals from Laboratories."

In view of this article, a prompt revision seems necessary, and possibly past bulk disposal of some cyanate wastes may require further examination and recoveries to redispose properly. Besides the explosiveness, cyanate is easily converted back to cyanide complexes by ferrous ion, common in plumbing lines, and the complexes are listed as high hazard anions in the NRC book. Also, some tests that I have run using bleach diluted 10-fold to mix with diluted cyanate as might occur in drain lines have indicated no loss in oxidizing power despite an excess of cyanate.

This procedure, often used to completely destroy cyanide, did not cause nitrogen evolution as claimed, and led to a very pungent acrid odor (ClNCO?) being emitted. Consequently, several problems can occur in the disposal of these salts requiring their being listed as high hazard anions, and the ACS committee on hazardous wastes disposal should take appropriate steps to warn against casual disposal of cyanates and thiocyanates. Also the procedure in the NRC book for cyanide disposal probably should be altered, as it leads to cyanate plus some excess of bleach.

**James A. Singmaster III**
*San Juan, P.R.*

### Chemical bonding

SIR: Chemical bonding is at the very heart of chemistry. A real understanding of chemistry is impossible without a good understanding of chemical bonds—the essential missing link in the long-sought integration of theory with descriptive chemistry. Unfortunately, few if any of today's students can acquire such an understanding from their textbooks, because these books are badly out of date in important aspects of bonding. We wonder why so many of our most talented students elect to major in something else. I think it is because, being intelligent and thoughtful, they prefer to devote their energy to something that makes more sense. True learning is a blend of memorization with understanding, and understanding is woefully lacking in today's presentation of chemistry.

This is tragic. In the face of mounting evidence that our educational system is notably deficient in science, it is especially tragic. The tragedy is magnified by the fact that this deficiency in chemistry teaching is unnecessary, and has been so for more than 20 years. Experts agree that the presentation of chemistry should provide a smooth blend of theory and practice. Such a blend has never been achieved, because theory, as monopolized by quantum mechanics, is inherently unsuitable for simple classroom explanation, and because there has existed a large and highly significant void in the understanding of chemical bonds that more than 60 years of quantum theory has failed to fill. For more than two decades, that void could have been filled by acceptance of a simple theory of polar covalence that has no conflict with quantum theory but merely does what quantum theory cannot do and perhaps may never do—provides a simple, quantitatively accurate explanation of chemical bonds in terms of atomic properties caused by structure.

The current presentation of bonding is seriously defective in these important aspects:

- Frequently the significance of the electronic structure of "noble gas" atoms is badly misrepresented.
- The treatment of the concept of electronegativity is extremely inadequate and misleading, and the thoroughly validated partial charges obtained from it continue to be ignored,

### Correction

- Sept. 18, page 24: The reference to "Scheuer and Miller" in column three should have read "Scheuer and Moore."

# U.S. Chemical Companies Ponder Europe after 1992

## European Community's plan to create single market could mean big new opportunities for U.S. chemical industry, though concern persists that rules shaping EC-92 will discriminate against U.S., other foreign firms

**Earl V. Anderson,** C&EN Northeast News Bureau

EC-92 isn't exactly a household word in the U.S. But there's no doubt that it's well known throughout the corridors of U.S. industry, including the internationally oriented chemical industry.

EC-92, of course, refers to the European Community's sweeping and ambitious plan to remove internal trade barriers and to create a single, harmonized European market by the end of 1992. If EC-92 shapes up as planned, the EC will become the largest single integrated market in the world. It is the 12-nation community's answer to the inflation, low economic growth, and high unemployment that plagued Europe in the early 1980s. This European economic stagnation became so bad that it earned the dubious nickname "Eurosclerosis."

Many sensitive issues still are unresolved. But one thing is certain. By 1992, a new, different, and more integrated EC will be emerging. Generally, EC industries, including its chemical industry, strongly support EC-92. And although the leaders of some member countries are reluctant to surrender pieces of their "national sovereignty" to a multinational body, EC officials label EC-92 "irreversible."

Willy De Clercq, former EC commissioner for external relations and trade policy, calls EC-92 "the biggest deregulation exercise in the history of Europe." Certainly, many EC hopes are riding on it. One EC study estimates that the community's gross domestic product (GDP) will be 4 to 6.5% higher than it would be without EC-92. It should create an estimated 5 million sorely needed new jobs. It already has triggered a wave of corporate restructuring, mergers and acquisitions, joint ventures, and cross-marketing agreements. Both public- and private-sector demand for goods and services should rise markedly.

The enormous business potential of a unified European market with a population greater than that of the U.S. (320 million) and a combined gross national product of $4.6 trillion hasn't escaped the notice of U.S. chemical companies or U.S. government officials. Neither have the possible problems that could develop for U.S. business if the rules, or directives as they are called in the EC, that shape EC-92 have a distinctly "European" bias and discriminate against U.S. and other foreign companies.

EC Delegation, Washington, D.C., photo

*European Community headquarters in Brussels*

U.S. Trade Representative Carla A. Hills says the question that concerns the entire world is whether the barriers lowered within Europe will be raised around Europe. Whichever way that ball bounces, U.S. chemical companies and their trade associations are busy preparing for a Europe that will be dramatically different after 1992 than it has been in the past. Although industry leaders are quick to point out a vast array of potential problems, most of them concede that the opportunities far outweigh the pitfalls.

Richard E. Heckert, who retired in April as Du Pont's chairman and chief executive officer, is optimistic about EC-92. "A larger, more affluent, and more integrated European market has to be a more attrac-

## Ambitious EC-92 program was more than 40 years in the making

EC-92 is the catch-phrase for an ambitious program that the European Community has launched to unify its 12-country internal market. By doing so, EC leaders hope to bring an end to the economic malaise, or "Eurosclerosis," that had gripped Europe in the early 1980s.

A single internal EC market, they believe, will spur economic growth and make European companies more competitive, not only against imports but also in other world markets. To achieve this single market, EC-92 will remove all internal barriers to the free movement of goods, services, capital, and people among the 12 EC member nations. EC officials now call the single market process "irreversible." Although much has been done, there's still a long way to go before EC-92 becomes a reality. By implementing EC-92, the EC has rededicated itself to the original goals of the Treaty of Rome, the birth certificate that established the EC.

EC-92 was officially launched in 1985, when the EC Commission published a white paper called "Completing the Internal Market." However, as the name implies, this was far from the start of Europe's long trek toward a single European economy. By the time EC-92 becomes a fait accompli, Europeans will be able to look back more than 40 years to their first major step toward integration. It was in 1951 that six countries (Belgium, France, Italy, Luxembourg, the Netherlands, and West Germany) formed the European Coal & Steel Community (ECSC). Although it covered only two industrial sectors, ECSC nevertheless proved that it was possible to coordinate policy on a multinational level, independently of the founding national governments.

Buoyed by ECSC's success, leaders from the six countries started eyeing further economic integration. They achieved it in 1957, when they signed two treaties in Rome. One created the European Economic Community (EEC). The other established the European Atomic Energy Community (Euratom). Both the EEC and Euratom became effective Jan. 1, 1958. Together the three entities, ECSC, EEC, and Euratom, form the European Communities. But it's common practice now to simply refer to any or all as the European Community, or the EC. Over the years, the community has expanded to 12 member countries. In addition to the original six nations, EC members now include Denmark, Greece, Ireland, Portugal, Spain, and the U.K.

The goal of the Treaty of Rome signers was to form a customs union in which all obstacles to the free flow of goods, services, people, and capital among member countries would be re-

tive market for U.S. companies," he says. That goes for all U.S. companies, those that only export to Europe from the U.S. and those that produce within the EC through subsidiaries.

K. James O'Connor Jr., associate director of international trade for the Chemical Manufacturers Association (CMA), agrees. He says that a sense of optimism pervades the U.S. chemical industry as it awaits EC-92. Most U.S. chemical companies look upon EC-92 as an opportunity to tap a larger, more vigorous, and easier to penetrate European market.

But alongside the optimism linger those ever-present concerns. Will the new EC technical requirements and competition policy discriminate against U.S. and other non-EC companies? Despite repeated EC disclaimers, many wonder if EC leaders will weave new forms of protectionism into the fabric of EC-92 to create a "fortress Europe."

As Heckert points out, even now the doors to EC markets aren't completely open to imports. If EC-92 eliminates or substantially reduces present barriers to outside trade, U.S. chemical companies stand to gain, and gain big. But there's always the corollary. If things go the other way, they could suffer setbacks in the EC market.

There's much for the U.S. chemical industry to lose. Two-way chemical trade between the U.S. and the EC hit a record $17.2 billion last year. The U.S. exported $8.37 billion worth of chemicals to the 12-nation community in 1988, a hefty 26% of total chemical exports. That volume makes the EC by far the largest U.S. chemical export market.

Conversely, the EC ships more chemicals to the U.S. than any other trading bloc. Last year, the U.S. imported $8.85 billion in chemicals from the EC, a staggering 45% of total chemical imports.

But despite their size U.S. chemical exports to the EC belie the vast potential that awaits U.S. chemical companies there. Last year, total chemical sales in the EC hit $311 billion, according to the European Council of Chemical Manufacturers' Federations (CEFIC). That's 29% greater than the $241 billion in U.S. shipments of chemicals and allied products in 1988.

Because each of their national markets are relatively small, the EC chemical companies that generated those sales are heavily export oriented. Last year, their chemical exports hit $135 billion, more than four times what the U.S. shipped abroad. About 60%, or $79 billion, of those exports was intra-EC trade; that is, they were shipped by one EC country to other EC countries. The $8.37 billion in chemicals that the U.S. ships to the EC pales by comparison.

For large multinational companies such as Dow Chemical and Du Pont, which have had subsidiaries producing within the EC for years, the opportunities and challenges that EC-92 present are fairly clear. Because they receive "national treatment" as EC companies, they will fare the same as "European" chemical companies under EC-92. They should be able to rationalize production and increase their efficiencies the same as their European counterparts. Their costs of doing business in a single market with uniform regulations, even their R&D costs, should drop significantly.

For smaller U.S. chemical companies, however, the future under EC-92 is less clear. If they haven't done

moved. In addition, all tariffs on intra-EEC shipments would be eliminated and a common external tariff established against noncommunity imports. Handling the internal and external tariffs proved far easier than solving the other problems. Industrial tariffs among the six member countries were removed and a common external tariff established in 1968.

Although the EC is a customs union in name, many nontariff barriers and other roadblocks still hamper the free flow of goods and services among the member countries. In fact, during the early 1980s, as economic stagnation gripped Europe, the ranks of unemployed workers swelled. European industries found it more difficult to compete against imports. As a result, EC member countries were pressured into erecting even higher trade barriers. These barriers impeded not only imports from third countries but from fellow members as well.

Faced with this Eurosclerosis, member governments realized that more, not less, cooperation was the key to increasing the efficiency and competitiveness of Europe's flagging industries. In 1982, the European Council stamped "priority" on the task of completing the internal market. The white paper published in 1985 listed all the measures still needed to complete the internal EC market.

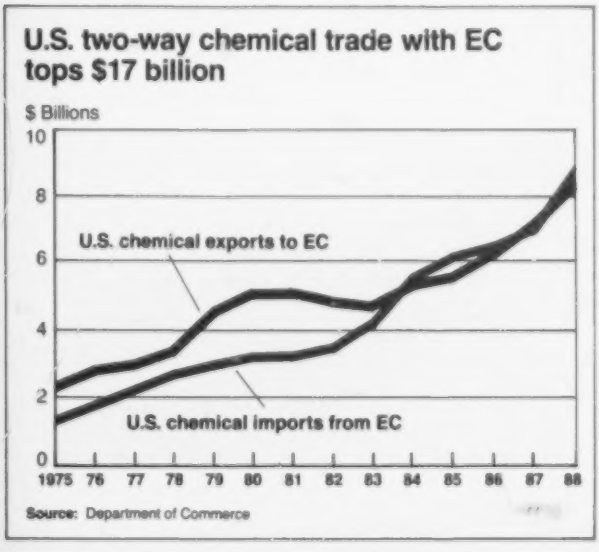
The white paper is a very detailed document. It contains about 300 measures, or directives, designed to remove all physical, technical, and fiscal barriers to trade. More have been added since then. And it sets down a detailed timetable for implementing them. The deadline: Dec. 31, 1992.

But the white paper would be just another piece of paper without the Single European Act. This act, which became effective in 1987, changes the voting procedures set forth in the Treaty of Rome. Instead of requiring a unanimous vote of the council, the act makes it possible to adopt many of the measures required for EC-92 by majority vote. About two thirds of the internal market directives listed in the white paper are subject to majority, rather than unanimous, vote. The primary exceptions concern taxes, professional qualifications, and employee rights.

Another important step toward EC-92 was the 1979 Cassis de Dijon case. In this case, the European Court of Justice said the commission has authority to overrule discriminatory import restrictions that individual member states impose on products made and marketed elsewhere in the EC. But without the Single European Act, EC-92 and its promise of a unified EC market probably would remain a dream. With it, the prospects for EC-92 are good.

so already, some of these companies will be looking to establish a production base within the EC through mergers and acquisitions. It's no coincidence that, since 1985, when EC-92 first took wing, the book value of direct U.S. chemical investment in the EC has soared. According to the Department of Commerce, U.S. chemical investment in the EC was $7.8 billion at the end of 1985. By the end of last year, it had rocketed to $14.4 billion.

But if a small U.S. company cannot, or will not, commit capital to establish a presence in the EC, the concerns about EC-92 are very real. These companies believe that the only way that they can benefit from the resurgent economy that EC-92 promises is to receive equal treatment along with their European competitors. And they fear that there may be as many pitfalls as promises as the EC blends 12 policies into one in such areas as technical standards, product testing and certification, competition policy, trade policy, and others.




For them, one overriding fact stands out. EC-92 was designed by Europeans to help Europeans. As EC-92 permits European chemical companies to become leaner and meaner, they likely will become even more formidable world-class competitors than they already are. They will be the ones with the inside track to a bigger share of a bigger EC market. And they will loom ever larger in U.S. and other world markets as well.

Like most others in the chemical industry who are playing an active role in monitoring EC-92, Richard M. Patterson feels good about the U.S. chemical industry's prospects after EC-92. Patterson, government relations manager for Dow Chemical U.S.A., says one of his primary goals is to see that the two-way U.S.-EC chemical trade continues to grow. If the U.S. and the EC work together, he is positive that it will increase. "It's in our mutual best interests to cooperate," says Patterson. "They [the EC] won't shoot themselves in the foot."

Nevertheless, he concedes that, for some U.S. chemical companies, there could be problems ahead as the EC completes its internal market. What's more, those problems will differ from company to company. How a U.S. company with heavy investment and plant

capacity in Europe fares may be completely different from a company that exports to Europe only from its U.S. plants.

Dow, of course, is watching EC-92 from both perspectives. With its plants in West Germany, the Netherlands, Spain, Italy, and Portugal, it has been a major factor on the European chemical scene for a long time. Dow Europe is, essentially, a European company.

The entire panoply of developments coming out in EC directives will have an impact on Dow Europe, says Patterson. And he thinks that the changes that will come with EC-92 will give Dow Europe significant advantages. For instance, the savings in some activities such as sales and transportation could add $40 million to $50 million per year to Dow Europe's bottom line. Why? Because, when the EC market becomes unified, "you're talking one product for all of the EC instead of several. You're talking uniform shipping documents and uniform taxes," says Patterson.

Du Pont is another large U.S. multinational with a long and large legacy on the European chemical scene. Its European sales last year (including those of Conoco) were $9.5 billion, about 25% of total consolidated sales. Nancie Schalk Johnson, the company's manager for international trade and investment, is enthusiastic about EC-92's impact on Du Pont's European operations. For any product line that the company sells in Europe, she estimates that the potential is 5% greater with EC-92 than it would be without it. "A half billion dollars is not bad just for improved efficiency in the market," Johnson proclaims.

For some Du Pont products, the savings could be even greater. The company, for instance, makes medical x-ray film both in the U.S. and in Europe to serve both areas. It uses identical technologies, ingredients, and similar economies of scale in both locations. But Johnson estimates that, without EC-92, total costs in Europe are 40% higher than in the U.S.

Even as an exporter, says Dow's Patterson, Dow U.S.A. probably will benefit from EC-92, not only from the uniformity that it will bring, but also because of the new markets that are expected to develop as the EC economy grows. There is one caveat to that outlook, however, and that is the safety, health, and environmental standards that are being developed as part of the EC-92 program. If they have an anti-U.S. bias to them, then all bets are off. U.S. chemical exports to the EC could be hurt, and hurt badly.

Karen M. El-Chaar, international affairs analyst for the international gas division of Air Products & Chemicals, is also cautious. She says that small and mid-sized U.S. exporters are not so well positioned as the multinationals to cash in on EC-92. As a result, they are more anxious about its potential negative impact.

A leaner and meaner Europe, says El-Chaar, will put pressure on all U.S. businesses, not just those that trade with Europe. But for those who export to the EC in competition with European companies, the pressure will be particularly severe. To expand or even retain market share in an integrated EC, she says that the most critical choice facing small and mid-sized

Du Pont photo

***Heckert: larger, more affluent, more integrated market***

U.S. exporters is the route they will use to move their products into the EC market. Direct investment within the EC is one obvious choice. It also is one that many larger U.S. chemical companies have chosen.

But companies that don't opt for direct investment must make other choices. If they want to continue exporting, they need to evaluate exporting directly or through agents or distributors. Aside from exporting, they also may want to consider licensing, franchising, technical agreements, and coproduction agreements. Such agreements help U.S. companies reduce risk by using the capital of their European partners. But they also have less control over their technology and more anemic profits.

Nothing about EC-92 concerns U.S. chemical companies more than the community's attempt to streamline its process for setting standards and to harmonize the many different national standards that now exist. Secretary of Commerce Robert A. Mosbacher made this clear when he said, "The issue of how standards will be set and what they will be is a top concern of the American business community."

About half of the EC directives on EC-92 deal with standards. In its recent study on the impact of EC-92 on the U.S., the International Trade Commission (ITC) pinpoints standards as one potential trouble spot for the U.S. chemical industry. John J. Gersic, head of ITC's chemicals section and a coleader of its EC-92 study project, says the number of products that may be affected is "potentially tremendous." Pesticides, fertilizers, cosmetics, and detergents are among those products.

The EC's attempt to harmonize its standards could turn out to be a double-edged sword. On the surface, greater harmonization of its many diverse national standards are expected to benefit U.S. companies. U.S. firms can produce a single product that they can market in all 12 EC countries, rather than modify

their product for each individual market. The cost savings could be tremendous.

But potential problems lay beneath that surface. In a recent report on EC standards, the U.S. Chamber of Commerce raised these questions:

- Will the new harmonized EC standards aid or impede U.S. access to the European market?
- Will U.S. business, as a result of harmonization, have to meet EC standards that exceed those that now exist?
- Will U.S. industries have a voice in the EC standards-setting process?
- Will U.S. standards become increasingly isolated as the EC adopts its own standards?
- Will the EC's new testing and certification procedures amount to de facto barriers to U.S. products?

As yet, there are no clear-cut answers to these questions. It's no secret, however, that standards have been used to block otherwise competitive imports from entering a national market. The idea behind EC's standards harmonization effort is to make it easier for one member country to trade with other members. But the standards that the EC adopts could lower—or raise—barriers to imports from the rest of the world. It all depends on how the EC handles the details on standards, testing, and certification.

Under the EC's "new approach," the EC Commission will issue directives that specify very brief mandatory characteristics for groups of products that are considered risks to safety, health, and the environment. These are the so-called SHE directives and they are the ones that concern the U.S. chemical industry the most. To move freely throughout the EC, products in these specific groups must meet the directive's "essential requirements," as the EC calls them.

Meanwhile, two other standards approaches will be set up for the thousands of other products that will not be regulated by the essential requirements directives. For some, the community's "mutual recognition" concept comes into play. Under mutual recognition, if a product is certified as meeting a standard in one EC country, it can be marketed in any EC country. Others will be covered by product standards that will be established voluntarily throughout the EC.

Nothing about EC-92 standards irks U.S. chemical industry trade officials more than their inability to participate in EC standards-making procedures. U.S. firms with subsidiaries in Europe can take part through the various national standards groups that are associated with EC-wide standards organizations such as the Comité Européen de Normalisation (CEN). CEN will develop the detailed technical specifications for many of the "essential requirements" directives.

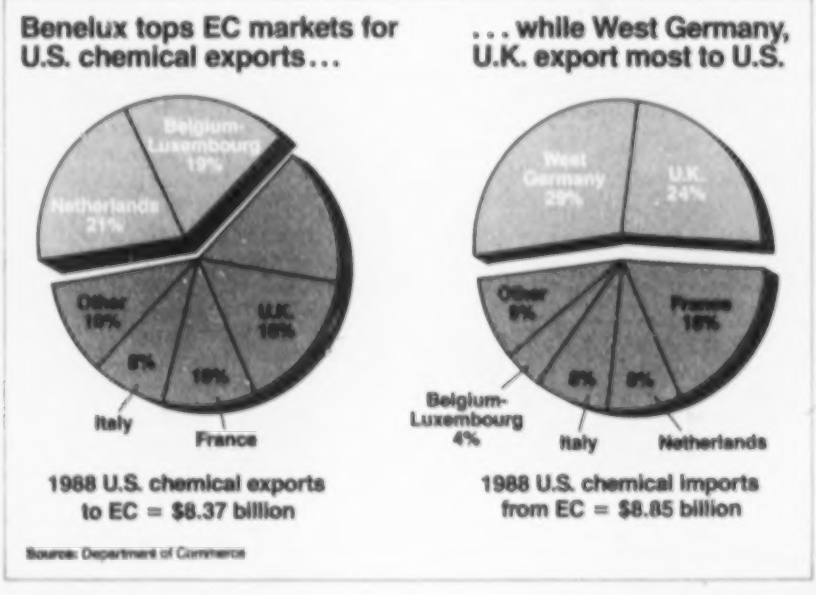
Companies that are not inside EC, however, "are out in the cold," says Stephen Cooney, director of international development and finance for the National Association of Manufacturers (NAM). The EC stresses that draft standards are always circulated to a U.S. standards group, usually the American National Standards Institute (ANSI) before they are finally adopted. But Cooney says that by then, it's already too late for U.S. companies to suggest changes. Chemical company executives couldn't agree more. This factor alone probably accounts for much of the direct investment that U.S. chemical companies have made in the EC.

In fairness, the EC is trying hard to improve outsider access to its standards-setting procedures. This was confirmed in a joint statement by Commerce Secretary Mosbacher and EC Internal Market Commissioner Martin Bangemann earlier this year. The statement also confirmed that the EC would attempt to develop international, rather than EC-only, standards.

ANSI has suggested that a representative of the international standards bodies be allowed to attend technical meetings of the EC standards associations. This proposal has wide international support, and community officials seem favorably inclined toward it. Meanwhile, a bill in Congress would give $250,000 to the National Institute of Standards & Technology (NIST) for a pilot project to help countries draft standards that are beneficial to U.S. producers and products.

Even after a standard emerges that looks good to U.S. companies, they still have to thread their way through testing and certification procedures. "This could be the 'Achilles' heel' of the EC standards harmonization process," says Michaela D. Platzer, EC-92 program director for the Chamber of Commerce and coauthor of its report on EC standards.

Many unanswered questions remain, says Platzer. What laboratory testing protocols will be accepted by the EC? Will U.S. testing laboratories be accredited?



Will a company's own declaration of conformity be as creditable if it comes from a U.S. company as one that comes from a European company? There are no answers yet.

NAM's Cooney doesn't believe that the EC intends to use EC-wide standards as a barrier to trade with the rest of the world. Many in the chemical industry who have followed the standards issue agree. They warn against putting too much emphasis on the negative aspects of EC standards harmonization. The alternative, they point out, is for the EC to generate a completely new set of "EC standards" that would differ from both U.S. and international standards. That would force U.S. companies to produce products to three different sets of standards. The EC, says Dow's Patterson, is becoming much more aware of the need to harmonize EC and U.S. standards.

But despite the EC's best intentions, says Cooney, the pressures of time could limit its genuine efforts to achieve a truly international consensus. It takes about seven years to produce the typical international standard. The EC is aiming for a two-year turnaround on new standards proposals.

And there's always the possibility that some companies in some countries may try to manipulate standards to maintain or increase their market share. To make sure that nothing falls between the cracks, CMA and the Synthetic Organic Chemical Manufacturers Association (SOCMA) have developed "watch lists" of EC directives that they consider particularly important to U.S. chemical companies. Most of them concern standards, especially the SHE—safety, health, and environmental—directives.

Almost 80 EC directives are on the chemical industry watch lists, but the lists, says Patterson, are "moving targets." Each directive has been assigned to a company, which will analyze it and estimate its potential impact on the industry.

Each directive on the watch list also has been assigned an arbitrary "interest score" or number indicating how much interest the industry has in that particular directive. The higher the number, the greater the interest. All of the directives on the watch list have some potential impact on U.S. chemical companies. Otherwise, they wouldn't be on the list. However, those with the greatest interest among chemical companies include:

- L-90—good laboratory practices (nonclinical testing of chemicals).
- L-94—protection of workers by banning certain chemical agents and activities.
- C-34—extraction solvents.

The L and C numbers refer to identification numbers used by the Department of Commerce to track EC-92 developments as they occur. The department's International Trade Administration has set up a group—Single Internal Market Information Service (SIMIS)—specifically for that purpose.

SIMIS compiles all of the directives and initiatives that the EC has approved or is considering to complete its internal market and assigns them an identification number. L documents are directives, recommendations, and decisions that already have been approved by the member states and now are binding. C documents list those that still are being considered. These proposals are not binding yet, but their intention is clear. A third section in the SIMIS list covers regulations that the EC is committed to proposing, but for which no printed version exists. The SIMIS list now contains almost 390 directives and proposals.

The U.S. chemical industry is cautiously optimistic that the standards issue will be resolved satisfactorily for both the EC and the U.S. Too much two-way trade is at stake. The EC, says Patterson, has become much more aware of the need to harmonize U.S. and community standards. CMA says the General Agreement on Tariffs & Trade (GATT) standards code provides a sound basis for quickly resolving potential problems as the EC standards-setting process continues.

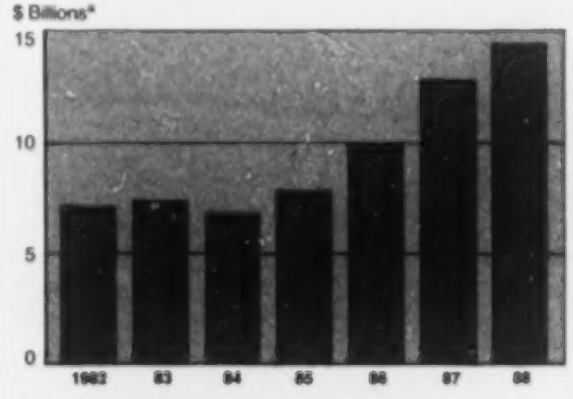
Although the standards issue looms head and shoulders above all others for the U.S. chemical industry, it is far from being the only one. How the EC intends to handle foreign direct investment and intellectual property rights are high on the list of chemical industry concerns. There is nothing in the EC directives, from government procurement, finances, customs controls, and transportation, to tax revision and competition policy, that won't affect U.S. chemical business in the EC.

None will bear watching more closely than the relationship between EC-92 and the Uruguay round of multilateral trade negotiations, now nearing completion at GATT in Geneva. U.S. Trade Representative Hills says that the very health of the entire global trading system will be determined by two events—EC-92 and the Uruguay round.

The U.S. chemical industry is a global industry. Any changes in trade policy—by anyone, anywhere—can help to shape its international business. Consequently, the industry has a lot riding on the outcome of the Uruguay round.

While the EC is engineering its EC-92 program, it also is a major player at the GATT trade negotiating

**U.S. chemical industry's investment in EC has doubled since 1982**




a Book value at year's end. Source: Department of Commerce

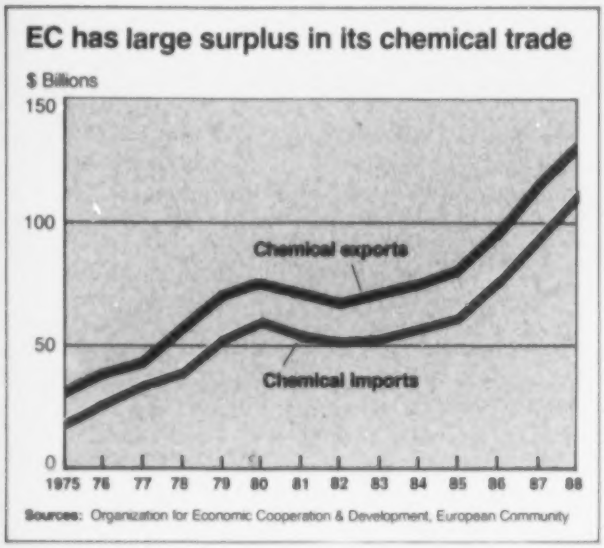

EC has large surplus in its chemical trade
$ Billions
150
100
50
0
Chemical exports
Chemical imports
1975 76 77 78 79 80 81 82 83 84 85 86 87 88
Sources: Organization for Economic Cooperation & Development, European Community

table. U.S. chemical industry leaders, along with everyone else, wonder what impact EC-92 may have on those trade talks. EC officials no doubt will abide by its existing GATT obligations. But, for some areas such as intellectual property, foreign investment, and services, there are no GATT rules. These are still being negotiated in the Uruguay round. The question that looms large for the U.S. chemical industry is whether the Uruguay round will help to shape the outcome of EC-92 in these areas, or vice versa. The trade committees at CMA and SOCMA are watching the linkages between EC-92 and the Uruguay round closely.

Some internal EC policies and directives related to EC-92 may already be in place before negotiators reach their final decisions on these same issues at the GATT talks. If so, the EC may want to use them as bargaining chips in the Uruguay round. That way they can claim credit for the steps they have taken to liberalize the EC market, without having to negotiate them away in the trade talks.

Conversely, GATT negotiators are striving to come up with new international rules in areas not already covered by GATT. Foreign investment and intellectual property rights, as well as agricultural and services trade are prime examples. However, if the Uruguay round doesn't yield agreements on these areas, U.S. chemical industry trade experts wonder what the EC will do.

EC officials have said that they will allow imports from non-EC countries to enter the EC on a "reciprocal" basis until new international rules are established. But reciprocity is not clearly defined.

The EC already has put reciprocity clauses into several proposed directives. But U.S. government and business leaders aren't happy about them. They fear that these provisions could discriminate against U.S. companies. U.S. government officials say that reciprocity is not consistent with the principle of national treatment that they prefer.

The EC recently has been easing up on its reciprocity stance. But the uncertainty about reciprocity, along with the uncertainty about the interplay between EC-92 initiatives and the Uruguay round, makes U.S. chemical trade officials nervous.

Proposals to change the EC's intellectual property rules probably will help EC industries, including its chemical industry, to protect their vital technology. They should benefit from greater recognition of EC-wide patents and from the new Community Patents Appeals Court.

U.S. exporters may not be so fortunate. Last month, for instance, deputy U.S. trade representative S. Linn Williams asked the EC to change a proposed directive that he thinks will deny patent coverage for some U.S. biotechnology products. The proposed directive may streamline EC patent coverage in biotechnology, but, Williams says, U.S. biotechnology patent holders could be hurt by it.

Air Products' El-Chaar cites local content laws as a possible sore spot. These laws require foreign-owned companies to buy a minimum percentage of their supplies from domestic sources. She says the EC Commission is considering local-content requirements that could push U.S. firms into investing in the EC simply to avoid the import restrictions that these rules impose.

Although neither CMA nor SOCMA has issued position papers yet, they and their members generally support the EC's attempt to unify its internal market. So far, CMA's trade officials say they see nothing in EC-92 that singles out the chemical industry for special treatment or that overtly discriminates against non-EC companies in any way.

But CMA and SOCMA aren't throwing caution to the wind, either. They will continue to maintain their "watch lists" and try to make changes in those EC directives that they think may harm U.S. chemical companies.

Du Pont's Johnson wonders if the U.S. chemical industry should greet EC-92 with "Europhoria" or "Europaranoia." Her answer: somewhere in between. And that's just about where the U.S. chemical industry's reaction lies.

"At the very least, things will not get worse under EC-92," says Du Pont's Heckert. At best, he adds, substantial gains are likely for internal EC growth and for growth in world trade.

Heckert also believes that concerns about EC-92 are overblown and could be counterproductive. U.S. companies that export to Europe or produce there should accept the fact that major, and perhaps irreversible, changes are taking place in that market, he says. His advice: Companies should focus on being as competitive as possible so that they can share the benefits of a truly integrated EC market.

At the same time, Heckert warns both companies and U.S. government officials to pay attention to and react quickly to any EC-92 developments that aren't in their own best interests. He doesn't think that EC-92 will create a "fortress Europe." But he believes that, if the EC chooses protectionism, the U.S. should retaliate.

Few in the chemical industry would disagree with him. □